Dell™ OptiPlex™ GX270 Service Manual

Safety Instructions
Opening the Computer Cover
Chassis Intrusion Switch
Control Panel
I/O Panel
Power Supply
System Board
Closing the Computer Cover

To remove or replace all other GX270 components, see the *Dell OptiPlex GX270 Systems User's Guide*.

NOTE: A NOTE indicates important information that helps you make better use of your computer.

NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

CAUTION: A CAUTION indicates a potential for property damage, personal injury, or death.

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Chassis Intrusion Switch

Dell™ OptiPlex™ GX270 Service Manual

- Removing the Chassis Intrusion Switch
- Replacing the Chassis Intrusion Switch
- Resetting the Chassis Intrusion Detector

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

NOTICE: Before you disconnect a device from the computer or remove a component from the system board, verify that the standby power light on the system board has turned off. To locate the light, see "System Board."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

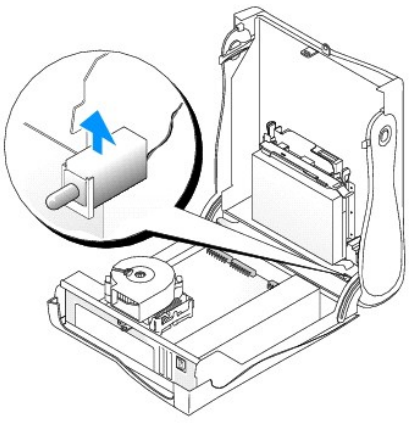
Removing the Chassis Intrusion Switch

1. Disconnect the chassis intrusion switch cable from the control panel on the front of the computer.

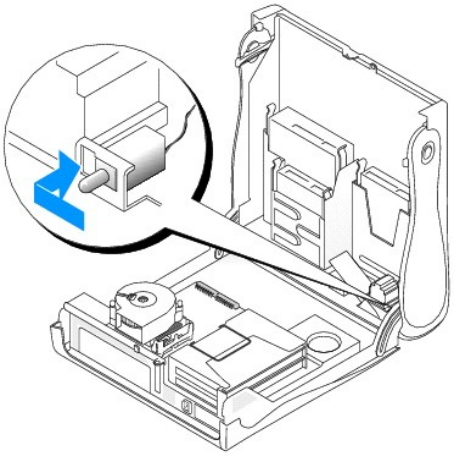
   Note the routing of the chassis intrusion cable as you remove it from the chassis. Chassis hooks may hold the cable in place inside the chassis.

2. Slide the chassis intrusion switch out of its slot, and remove the switch and its attached cable from the computer.

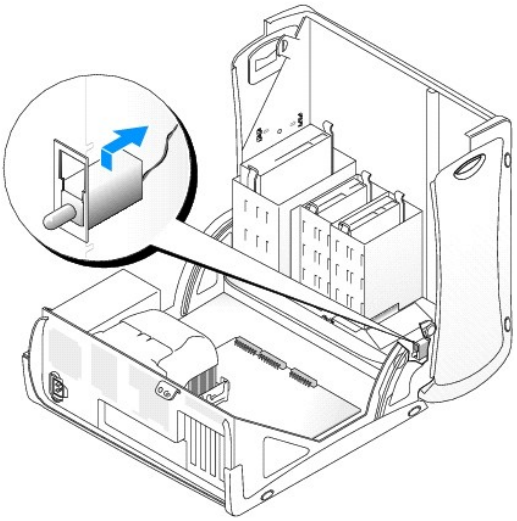
Small Form-Factor Computer



Small Desktop Computer



Small Mini-Tower Computer



Replacing the Chassis Intrusion Switch

1. Slide the chassis intrusion switch into its slot and reconnect the cable to the connector on the control panel.
2. Close the computer cover.
3. Attach the computer stand, if it is used.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

4. Connect your computer and devices to electrical outlets, and turn them on.

Resetting the Chassis Intrusion Detector

1. Enter system setup by pressing <F2> during the computer's start-up.

NOTE: For instructions on using system setup, see the *User's Guide*.

2. Under the **System Security** tab, reset the **Chassis Intrusion** option by pressing the left- or right-arrow key to select **Reset**. Change the setting to **Enabled**, **Enabled-Silent**, or **Disabled**.

NOTE: The default is **Enabled-Silent**.

NOTE: If a setup password has been assigned by someone else, contact the network administrator for information on resetting the chassis intrusion detector.

3. Press <Alt><b> to restart the computer and implement your changes.

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Control Panel

Dell™ OptiPlex™ GX270 Service Manual

- Removing the Control Panel
- Replacing the Control Panel

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

NOTICE: Before you disconnect a device from the computer or remove a component from the system board, verify that the standby power light on the system board has turned off. To locate the light, see "System Board."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

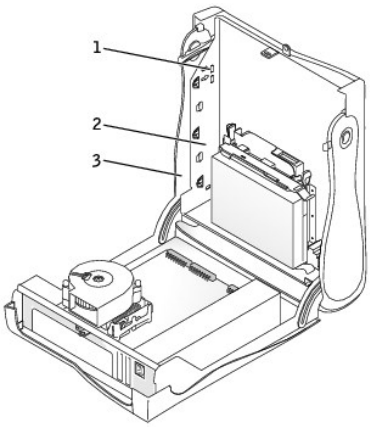
6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

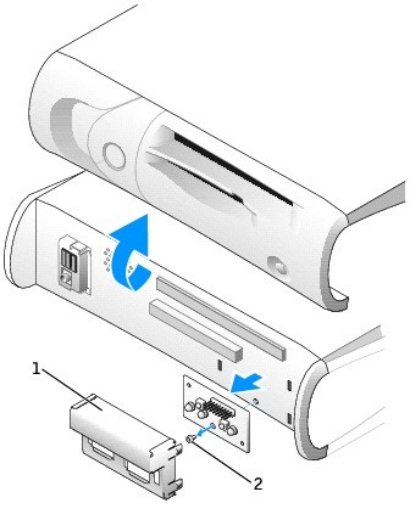
Removing the Control Panel

Small Form-Factor Computer

1. Using a flat-blade screwdriver, release the four tabs from the inside of the computer, and remove the computer cover from the computer.



1	tabs (2 on each side)
2	computer
3	computer cover

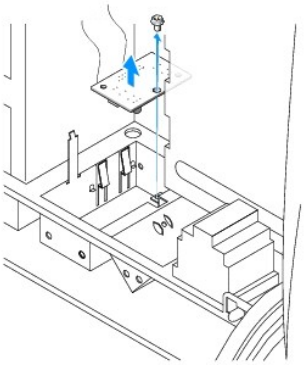


1	metal control-panel shield
2	screw

2. Remove the metal control-panel shield.
3. Remove the screw that holds the control panel to the computer, and remove the control panel.

Small Desktop Computer

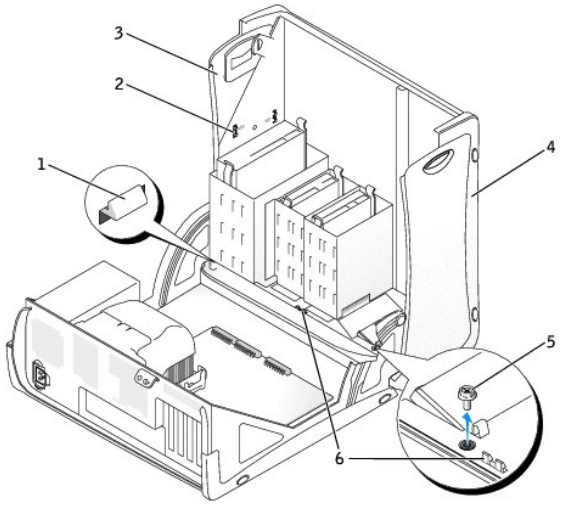
1. Remove the front I/O panel (see I/O Panel).



2. Using an 8-inch #2 Phillips screwdriver, remove the screw that secures the control panel to the computer, and lift the panel away from the computer.

Small Mini-Tower Computer

1. To remove the top and bottom panels of the computer, remove any installed CD drives and release all the tabs on each panel.

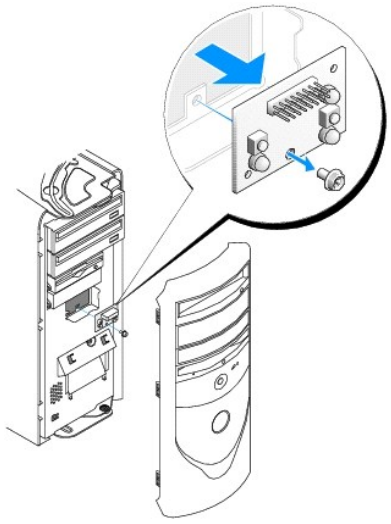


1	computer cover tab (remove the CD drive to access this tab)	**4**	bottom panel
2	top-panel tabs	**5**	computer cover screw
3	top panel	**6**	computer cover tabs (2)

2. To prepare the computer cover for removal, release the three computer cover tabs (one tab is located by the CD drive and two tabs are located by the I/O panel).

NOTE: To release the tab located by the CD drive, you can pry the computer cover away from the computer and pull out the tab.

3. If necessary, remove the computer cover screw.
4. Close the computer and remove the computer cover.
5. Remove the screw that secures the control panel to the computer, and pull the control panel away from the computer.



Replacing the Control Panel

Small Form-Factor Computer

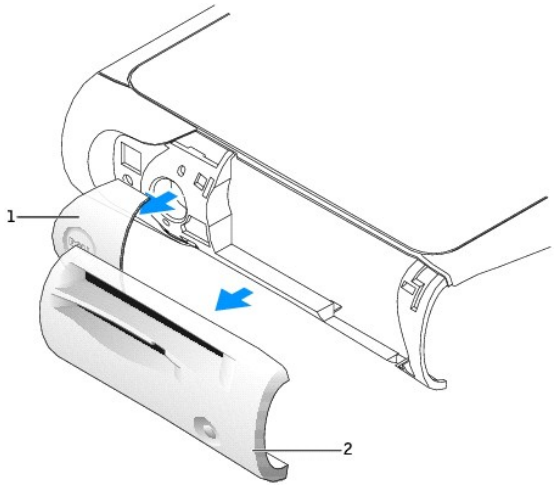
1. Replace the control panel and the control-panel shield.

2. Replace the computer cover. Ensure that the two metal hooks and tabs are securely in position.

To help replace the computer cover, remove the accent door and front mask from the computer cover:

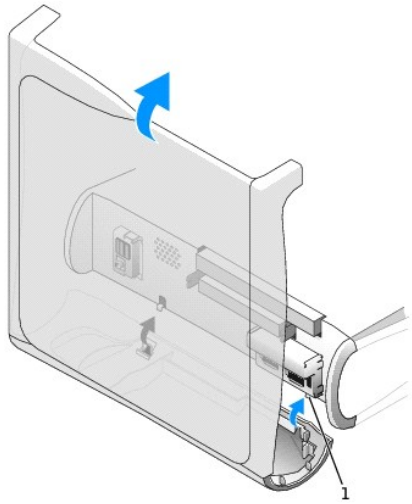
a. Remove the front mask by releasing the tabs on the inside of the computer cover.

b. Remove the accent door by pressing the middle of the door while you lift away the sides of the door.



1	accent door
2	front mask

3. Replace the computer cover and ensure that the two metal hooks and tabs are securely in position.



1	metal hooks (2)

4. To replace the front mask and accent door, press them into position.

Small Desktop Computer

Follow the steps in the "Removing the Control Panel" procedure in the reverse order, ensuring that all tabs are secure.

Small Mini-Tower Computer

Follow the steps in the "Removing the Control Panel" procedure in the reverse order, ensuring that all tabs are secure.

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Opening the Computer Cover

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CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

NOTICE: Ensure that there is sufficient space to support the open cover—at least 30 cm (1 ft) of desk top space.

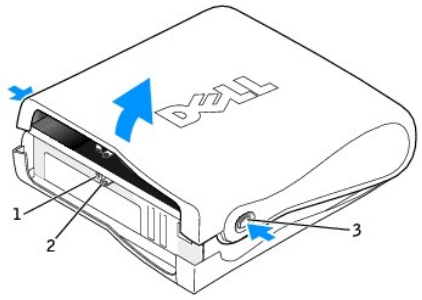
Small Form-Factor and Small Desktop Computers

1. Locate the *two* release buttons shown in the illustration. Then press the *two* release buttons as you lift the cover.

NOTICE: Open the cover slowly to ensure that you do not damage any cables.

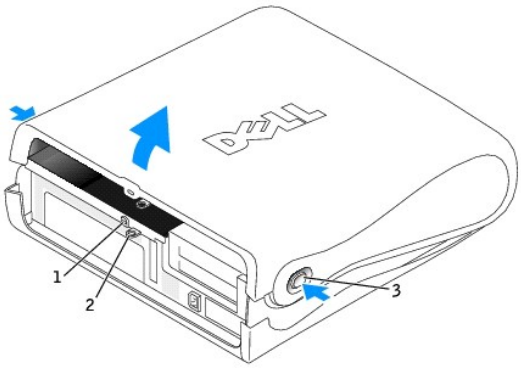
2. Raise the back of the cover, and pivot it toward the front of the computer.

Small Form-Factor Computer



1	security cable slot
2	padlock ring
3	release buttons (one on each side)

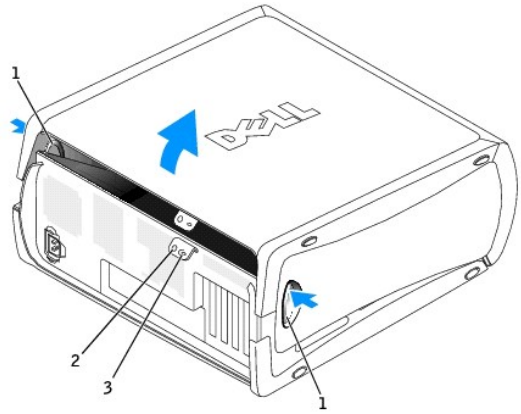
Small Desktop Computer



1	security cable slot
2	padlock ring
3	release buttons (one on each side)

Small Mini-Tower Computer

1. Lay the computer on its side as shown in the illustration.
2. Open the cover:
   a. Facing the back of the computer, press the release button on the right side of the computer with one hand while pulling up on the top of the cover with the other hand.
   b. Press the release button on the left side of the computer with one hand while pulling up on the top of the cover with the other hand.
   c. Hold the bottom of the computer with one hand, and then pull open the cover with the other hand.



1	release buttons (2)
2	security cable slot
3	padlock ring

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Closing the Computer Cover

Dell™ OptiPlex™ GX270 Service Manual

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

1. Ensure that all cables are connected, and fold cables out of the way.

   Gently pull the power cables toward you so that they do not get caught underneath the drives.
2. Ensure that no tools or extra parts are left inside the computer.
3. Close the cover:
   a. Pivot the cover down.
   b. Press down on the right side of the cover until it closes.
   c. Press down on the left side of the cover until it closes.
   d. Ensure that both sides of the cover are locked. If not, repeat step 3.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

4. Connect your computer and devices to electrical outlets, and turn them on.

   After you open and close the cover, the chassis intrusion detector, if enabled, causes the following message to appear on the screen at the next computer start-up:

   ```
   ALERT! Cover was previously removed.
   ```
5. Reset the chassis intrusion detector by entering system setup and changing the **Chassis Intrusion** setting to **Enabled** or **Enabled-Silent**.

NOTE: If a setup password has been assigned by someone else, contact your network administrator for information on resetting the chassis intrusion detector.

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I/O Panel

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- Removing the I/O Panel
- Replacing the I/O Panel

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

NOTICE: Before you disconnect a device from the computer or remove a component from the system board, verify that the standby power light on the system board has turned off. To locate the light, see "System Board."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from electrical outlets and press the power button to ground the system board.
5. If you have installed a padlock through the padlock ring on the back panel, remove the padlock.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

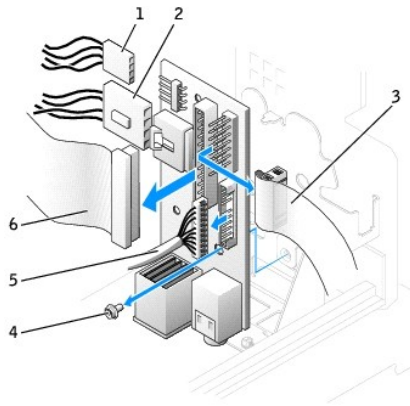
Removing the I/O Panel

1. On the small form-factor computer, to access the screw that holds the I/O panel to the computer, remove the hard drive.
2. On the small desktop computer, disconnect the hard-drive data cable.
3. Disconnect all cables that are connected to the I/O panel.

Note the routing of the control panel cable as you remove it from the computer so that you can replace it correctly.

4. From inside the computer cover, remove the mounting screw that secures the I/O panel to the computer.
5. Remove the I/O panel from the computer.

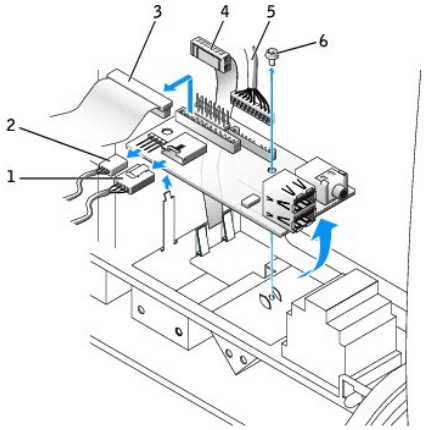
Small Form-Factor Computer



1	internal speaker cable	**4**	mounting screw

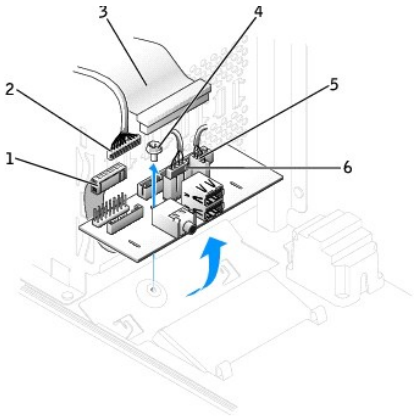
2	chassis-intrusion switch cable	5	front audio cable
3	control panel cable	6	I/O cable

Small Desktop Computer



1	chassis-intrusion switch cable	4	control panel cable
2	internal speaker cable	5	front audio cable
3	I/O cable	6	mounting screw

Small Mini-Tower Computer



1	control panel cable	4	mounting screw
2	front audio cable	5	internal speaker cable
3	I/O cable	6	chassis-intrusion switch cable

Replacing the I/O Panel

To replace the I/O panel, follow the removal procedures in the reverse order.

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Power Supply

Dell™ OptiPlex™ GX270 Service Manual

- Removing the Power Supply
- Replacing the Power Supply

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

NOTICE: Before you disconnect a device from the computer or remove a component from the system board, verify that the standby power light on the system board has turned off. To locate the light, see "System Board."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

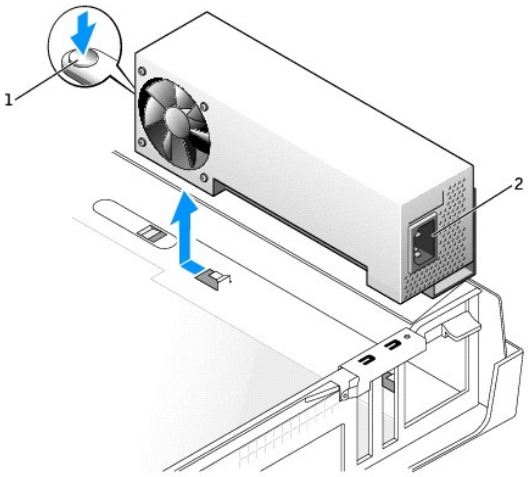
Removing the Power Supply

Small Form-Factor Computer

1. Disconnect the DC power cables from the system board and the drives.

   Note the routing of the DC power cables underneath the tabs in the computer frame as you remove them from the system board and drives. You must route these cables properly when you replace them to prevent their being pinched or crimped.

2. Press the release button located on the floor of the computer frame.



1	release button
2	AC power connector

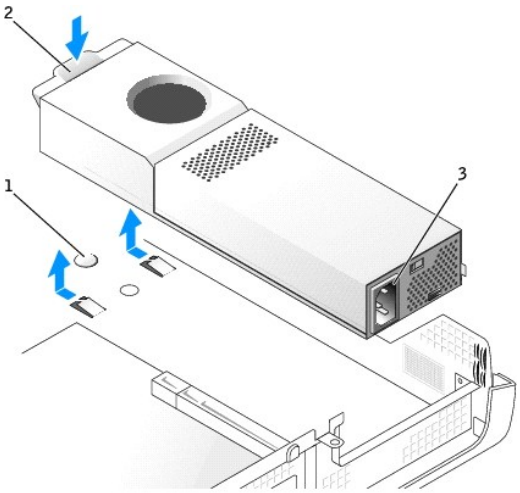
3. Slide the power supply toward the front of the computer approximately 1 inch.
4. Lift the power supply up and out of the computer.

Small Desktop Computer

1. Disconnect the DC power cables from the system board and the drives.

   Note the routing of the DC power cables underneath the tabs in the computer frame as you remove them from the system board and drives. You must route these cables properly when you replace them to prevent their being pinched or crimped.

2. Remove the expansion-card cage and remove the power cables from the side of the hard drive. To remove the power cables, use the cables as leverage and pull away from the clips while you pull on the metal clips with your fingers.
3. Press down on the handle, which in turn presses the release button.



1	release button
2	handle
3	AC power connector

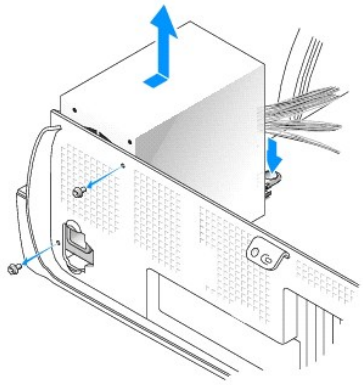
4. Slide the power supply toward the front of the computer approximately 1 inch.
5. Lift the power supply up and out of the computer.

Small Mini-Tower Computer

1. Disconnect the DC power cables from the system board and the drives.

   Note the routing of the DC power cables underneath the tabs in the computer frame as you remove them from the system board and drives. You must route these cables properly when you replace them to prevent their being pinched or crimped.

2. Remove the two screws that attach the power supply to the back of the computer frame.
3. Press the release button located on the floor of the computer frame.



4. Slide the power supply toward the front of the computer approximately 1 inch.
5. Lift the power supply up and out of the computer.

Replacing the Power Supply

1. Slide the power supply into place.
2. On the small mini-tower computer, replace the two screws that secure the power supply to the back of the computer frame.
3. Reconnect the DC power cables.
4. Connect the AC power cable to the connector.
5. On the small desktop computer, reattach the power cables to the side of the hard drive and replace the expansion-card cage.
6. Run the cables underneath the clips, and press the clips to close them over the cables.
7. Close the computer cover.
8. Attach the computer stand, if it is used.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

9. Connect your computer and devices to electrical outlets, and turn them on.

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System Board

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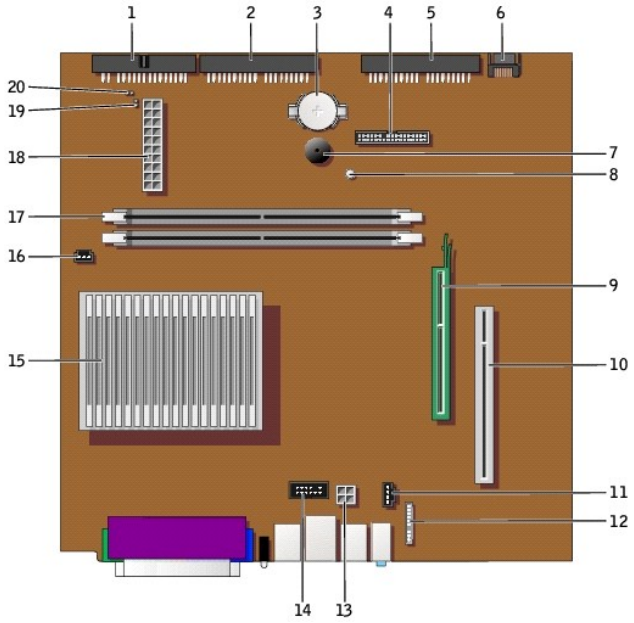
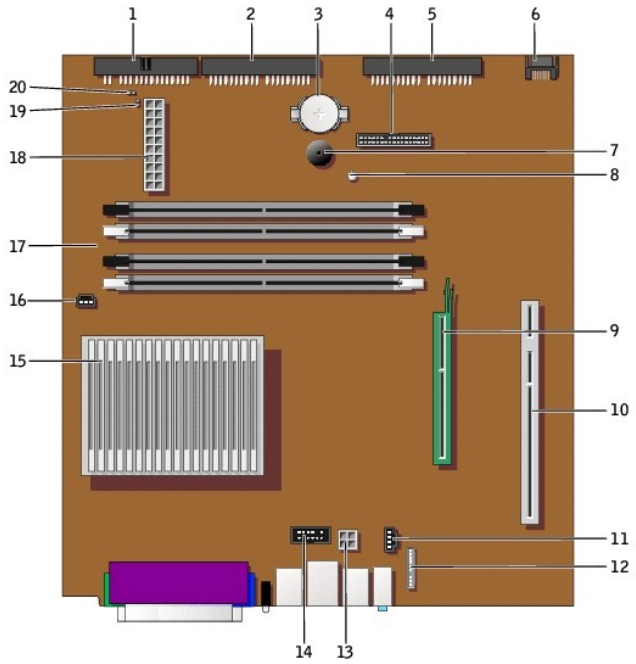
Small Form-Factor System Board



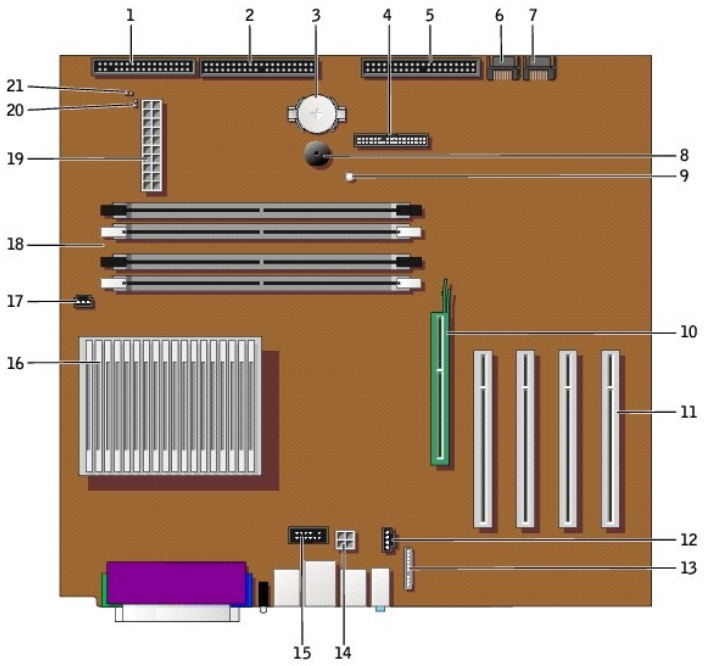
1	floppy-drive connector (DSKT)	11	CD drive audio cable connector (CD_IN)
2	CD/DVD drive connector (IDE2)	12	front-panel audio cable connector (FRONTAUDIO)
3	battery socket (BATTERY)	13	power connector (12VPOWER)
4	front-panel connector (FRONTPANEL)	14	serial port connector (SER2) for optional serial port cards
5	IDE hard-drive connector (IDE1)	15	microprocessor and heat sink connector (CPU)
6	serial ATA hard-drive connector (SATA1)	16	microprocessor fan connector (FAN)
7	internal speaker (SPEAKER)	17	memory module connectors (DIMM_1 and DIMM_2)
8	standby power light (AUX_PWR)	18	power connector (POWER)
9	AGP card connector (AGP)	19	RTC reset jumper (RTCRST)
10	PCI card connector	20	password jumper (PSWD)

Small Desktop System Board



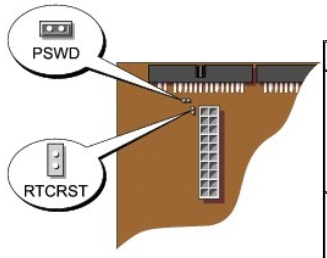
1	floppy-drive connector (DSKT)	11	CD drive audio cable connector (CD_IN)
2	CD/DVD drive connector (IDE2)	12	front-panel audio cable connector (FRONTAUDIO)
3	battery socket (BATTERY)	13	power connector (12VPOWER)
4	front-panel connector (FRONTPANEL)	14	serial port connector (SER2) for optional serial port cards
5	IDE hard-drive connector (IDE1)	15	microprocessor and heat sink connector (CPU)
6	serial ATA hard-drive connector (SATA1)	16	microprocessor fan connector (FAN)
7	internal speaker (SPEAKER)	17	memory module connectors (DIMMs 1, 3, 2, and 4)
8	standby power light (AUX_PWR)	18	power connector (POWER)
9	AGP card connector (AGP)	19	RTC reset jumper (RTCRST)
10	PCI riser board connector (PCI2)	20	password jumper (PSWD)

Small Mini-Tower System Board



1	floppy-drive connector (DSKT)	12	CD drive audio cable connector (CD_IN)
2	CD/DVD drive connector (IDE2)	13	front-panel audio cable connector (FRONTAUDIO)
3	battery socket (BATTERY)	14	power connector (12VPOWER)
4	front-panel connector (FRONTPANEL)	15	serial port connector (SER2) for optional serial port cards
5	IDE hard-drive connector (IDE1)	16	microprocessor and heat sink connector (CPU)
6	serial ATA hard-drive connector (SATA2)	17	microprocessor fan connector (FAN)
7	serial ATA hard-drive connector (SATA1)	18	memory module connectors (DIMMs 1, 3, 2, and 4)
8	internal speaker (SPEAKER)	19	power connector (POWER)
9	standby power light (AUX_PWR)	20	RTC reset jumper (RTCRST)
10	AGP card connector (AGP)	21	password jumper (PSWD)
11	PCI connectors (PCI 1, 2, 3, and 4))		

Jumper Settings



Jumper	Setting	Description
PSWD	(default)	Password features are enabled.
		Password features are disabled.
RTCRST		Real-time clock reset.
jumpered	unjumpered	

Resetting CMOS Settings

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

7. Reset the current CMOS settings:
   a. Locate the password and RTC_RST jumpers on the system board.
   b. Remove the password jumper from its pins.
   c. Place the password jumper on the RTC_RST pins and wait approximately 5 seconds.
   d. Remove the jumper from the RTC_RST pins and place the jumper back on the password pins.
8. Close the computer cover.
9. Attach the computer stand, if used.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

10. Connect your computer and devices to electrical outlets, and turn them on.

Removing the System Board

CAUTION: Before you begin any of the procedures in this section, follow the steps in "Safety Instructions."

1. Shut down the computer through the **Start** menu.
2. Ensure that your computer and attached devices are turned off. If your computer and attached devices did not automatically turn off when you shut down your computer, turn them off now.

NOTICE: To disconnect a network cable, first unplug the cable from your computer and then unplug it from the network wall jack.

3. Disconnect any telephone or telecommunication lines from the computer.
4. Disconnect your computer and all attached devices from their electrical outlets, and then press the power button to ground the system board.
5. Remove the computer stand, if it is attached.

CAUTION: To guard against electrical shock, always unplug your computer from the electrical outlet before opening the cover.

6. Open the computer cover.

NOTICE: Before touching anything inside your computer, ground yourself by touching an unpainted metal surface, such as the metal at the back of the computer. While you work, periodically touch an unpainted metal surface to dissipate any static electricity that could harm internal components.

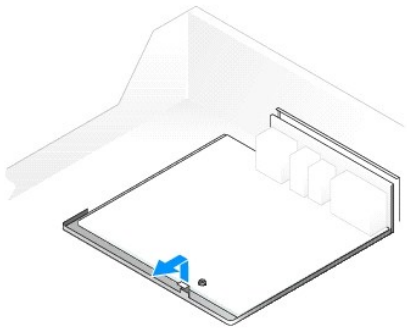
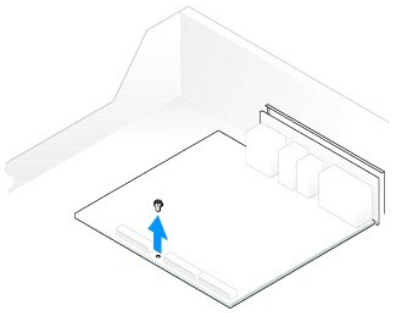
7. Remove any components that restrict access to the system board.
8. Disconnect all cables from the system board.
9. Before you remove the existing system board assembly, visually compare the replacement system board to the existing system board to make sure that you have the correct part.

NOTE: Your replacement board may or may not be attached to a metal tray. If your original system board was attached to a tray, you will transfer the replacement board to the metal tray before you install the new board. See step 1 in the next procedure.

10. Remove the system board:

    a. If your system board is attached to a metal tray, the board and the tray are connected and are removed as one piece. Pull up on the tab and slide the system board assembly toward the front of the computer, and then lift the board up and away.

    b. If your system board is secured to the computer with a screw, remove the screw and slide the system board toward the front of the computer, detaching it from the hooks on the floor of the chassis, and then lift the board up and away.

System Board/Metal Tray Assembly Removal	System Board Removal
	

11. Place the system board assembly that you just removed next to the replacement system board.

Replacing the System Board

1. If your original system board was attached to a metal tray and your replacement system board is not attached to a tray, attach the replacement board to the metal tray:

    a. Remove the screw that secures the original board to the metal tray, and then remove the system board by sliding the board back and detaching it from the hooks on the metal tray.

    b. Set the replacement system board on the metal tray, slide it forward to attach the board to the hooks on the metal tray, and then replace the screw.

2. Transfer components from the existing system board to the replacement system board:

    a. Remove the memory modules and install them on the replacement board.

CAUTION: The microprocessor package and heat-sink assembly can get hot. To avoid burns, ensure that the package and assembly have had sufficient time to cool before you touch them.

    b. Remove the heat-sink assembly and microprocessor from the existing system board and transfer them to the replacement system board.

3. Configure the settings of the replacement system board.
4. Set the jumpers on the replacement system board so they are identical to the ones on the existing board.

NOTE: Some components and connectors on the replacement system board may be in different locations than the corresponding connectors on the existing system board.

5. Orient the replacement board by aligning the notches on the bottom to the tabs on the computer.
6. Replace the system board:

    a. If your system board is attached to a metal tray, slide the system board assembly toward the back of the computer until the board clicks into position.

    b. If you removed a screw in step b in the previous procedure, slide the system board into position and replace the screw.

7. Replace any components and cables that you removed from the system board.
8. Reconnect all cables to their connectors at the back of the computer.
9. Close the computer cover.
10. Attach the computer stand.

NOTICE: To connect a network cable, first plug the cable into the network wall jack and then plug it into the computer.

11. Connect your computer and devices to electrical outlets, and turn them on.

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CAUTION: Safety Instructions

Dell™ OptiPlex™ GX270 Service Manual

- General
- When Working Inside Your Computer
- Protecting Against Electrostatic Discharge
- Battery Disposal

Use the following safety guidelines to help ensure your own personal safety and to help protect your computer and working environment from potential damage.

General

- Do not attempt to service the computer yourself unless you are a trained service technician. Always follow installation instructions closely.
- To help prevent electric shock, plug the computer and device power cables into properly grounded electrical outlets. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.

- To help avoid the potential hazard of electric shock, do not use your computer during an electrical storm.
- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm.
- If your computer includes a modem, the cable used with the modem should be manufactured with a minimum wire size of 26 American wire gauge (AWG) and an FCC-compliant RJ-11 modular plug.
- Before you clean your computer, disconnect the computer from the electrical outlet. Clean your computer with a soft cloth dampened with water. Do not use liquid or aerosol cleaners, which may contain flammable substances.
- To help avoid possible damage to the system board, wait 5 seconds after turning off the computer before disconnecting a device from the computer.
- To avoid shorting out your computer when disconnecting a network cable, first unplug the cable from the network adapter on the back of your computer, and then from the network jack. When reconnecting a network cable to your computer, first plug the cable into the network jack, and then into the network adapter.
- To help protect your computer from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).
- Ensure that nothing rests on your computer's cables and that the cables are not located where they can be stepped on or tripped over.
- Do not push any objects into the openings of your computer. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your computer away from radiators and heat sources. Also, do not block cooling vents. Avoid placing loose papers underneath your computer; do not place your computer in a closed-in wall unit or on a bed, sofa, or rug.

When Using Your Computer

When Working Inside Your Computer

Before you open the computer cover, perform the following steps in the sequence indicated.

⚠ **CAUTION: Do not attempt to service the computer yourself, except as explained in your online Dell™ documentation or in instructions otherwise provided to you by Dell. Always follow installation and service instructions closely.**

NOTICE: To help avoid possible damage to the system board, wait 5 seconds after turning off the computer before removing a component from the system board or disconnecting a device from the computer.

1. Perform an orderly computer shutdown using the operating system menu.

2. Turn off your computer and any devices connected to the computer.
3. Ground yourself by touching an unpainted metal surface on the chassis before touching anything inside your computer.

   While you work, periodically touch an unpainted metal surface on the computer chassis to dissipate any static electricity that might harm internal components.

4. Disconnect your computer and devices, including the monitor, from their electrical outlets. Also, disconnect any telephone or telecommunication lines from the computer.

   Doing so reduces the potential for personal injury or shock.

In addition, take note of these safety guidelines when appropriate:

- When you disconnect a cable, pull on its connector or on its strain-relief loop, not on the cable itself. Some cables have a connector with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before disconnecting the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.
- Handle components with care. Hold a component such as a microprocessor chip by its edges, not by its pins.

⚠ **CAUTION: There is a danger of a new battery exploding if it is incorrectly installed. Replace the battery only with the same or equivalent type recommended by the manufacturer. Do not dispose of the battery along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.**

Protecting Against Electrostatic Discharge

Static electricity can harm delicate components inside your computer. To prevent static damage, discharge static electricity from your body before you touch any of your computer's electronic components, such as the microprocessor. You can do so by touching an unpainted metal surface on the computer chassis.

As you continue to work inside the computer, periodically touch an unpainted metal surface to remove any static charge your body may have accumulated.

You can also take the following steps to prevent damage from electrostatic discharge (ESD):

- Do not remove components from their antistatic packing material until you are ready to install the component in your computer. Just before unwrapping the antistatic packaging, discharge static electricity from your body.
- When transporting an electrostatic sensitive component, first place it in an antistatic container or packaging.
- Handle all electrostatic sensitive components in a static-safe area. If possible, use antistatic floor pads and workbench pads.

Battery Disposal

Your computer uses a lithium coin-cell battery. The lithium coin-cell battery is a long-life battery, and it is very possible that you will never need to replace it. However, should you need to replace it, see "Replacing the Battery" in the *GX270 Systems User's Guide*.

Do not dispose of the battery along with household waste. Contact your local waste disposal agency for the address of the nearest battery deposit site.

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